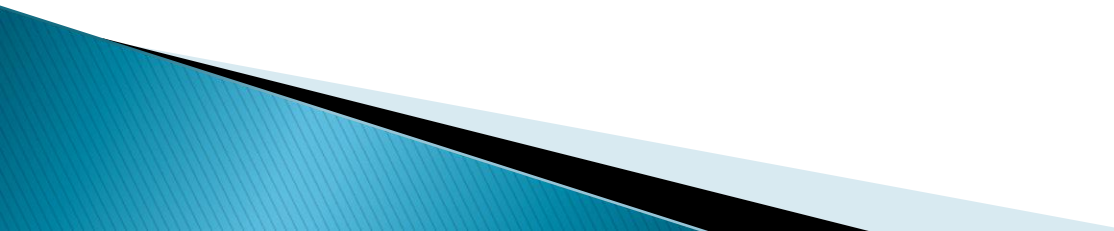


CEPI Presentation on Action Plan for Dombivali

Date :- 03/07/2015



BACKGROUND

- ❖ CPCB had carried out Comprehensive Environmental Assessment of 88 industrial clusters in country in Dec 2009 based on Comprehensive Environmental Assessment and Comprehensive Environmental Pollution index (CEPI).
 - ❖ CEPI is an attempt to analytically rank the pollution level in selected industrial clusters.
 - ❖ CPCB has selected 88 industrial clusters in country out of which 8 from Maharashtra.
 - ❖ 43 clusters identified as critically polluted areas here CEPI score is 70 or more.
 - ❖ Dombivali MIDC, Ph-I & Ph-II was one of them having aggregate score 78.41.
- 

Moratorium Imposed on critically polluted areas

- ▶ MoEF on 13 January 2010 imposed moratorium on environmental clearance for new project / expansion in the 43 critically polluted industrial clusters in order stimulate environmental remediation by the industry and by the State Government. This MoEF notification said that the moratorium would be in placed until :
- ▶ Action plans are prepared by the State Government concerned to deal with the problems of pollution.
- ▶ These Action Plans are reviewed by the CPCB.
- ▶ State Governments revise Action Plans based on the CPCB review.
- ▶ The process of implementing the revised Action Plans begins and the SPCB concerned and CPCB certify in writing that this process has indeed begun and implementation is being monitored systematically.

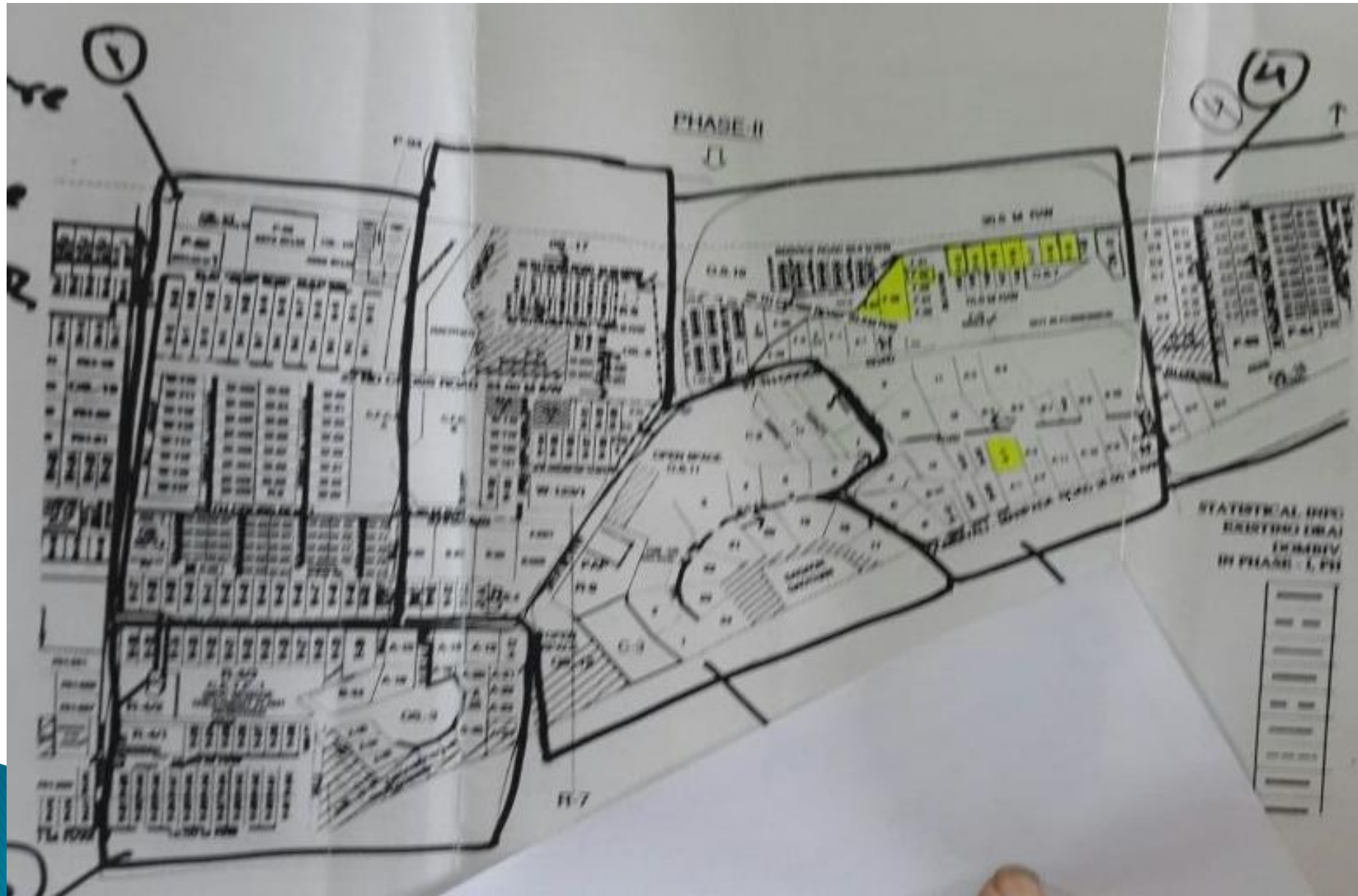
Moratorium Lifted of 8 critically Polluted Areas on 15th Feb 2011

- Dombivali Action Plan implementation started.
- These Action Plans were reviewed by CPCB and on the recommendations reported by CPCB, the moratorium has been lifted on 15th Feb, 2011 in 8 cities out of which one is Dombivali and a Press Note released by MoEF, GOI on 16th Feb, 2011.

Map of Ph-I, MIDC Dombivali



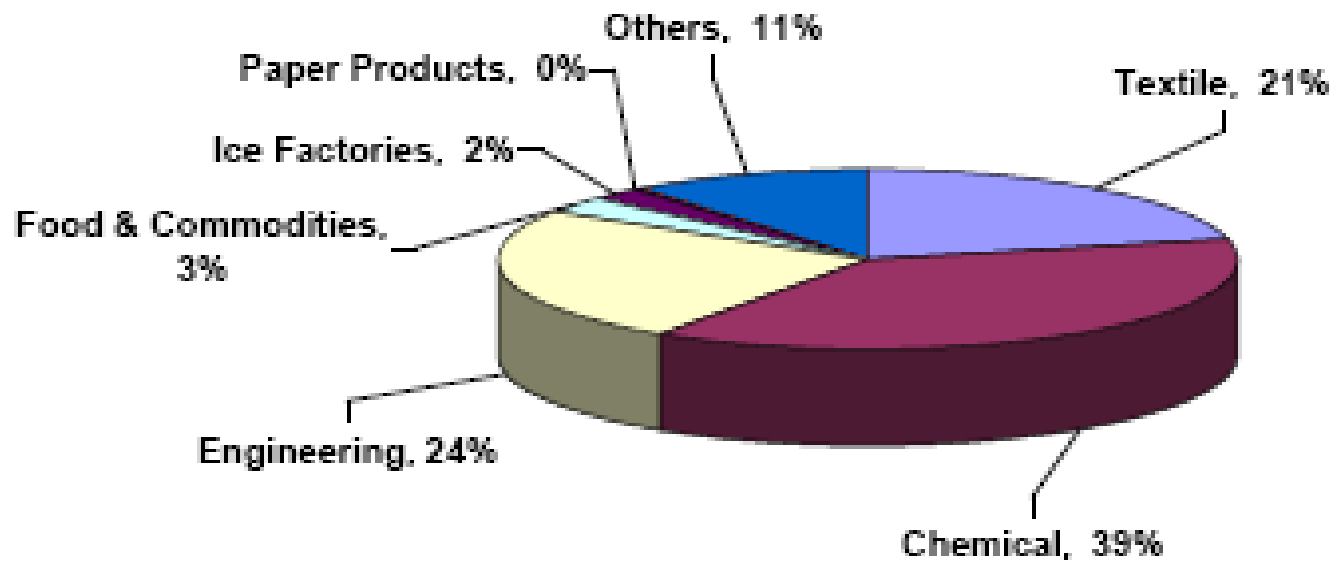
Map of Ph-II, MIDC, Dombivali



DOMBIVLI INDUSTRIAL AREA

- Dombivali MIDC is established in **1964**
- Sub-divided in **Two Phases**
- Phase I approx **148 Ha.** & Phase II approx **97 Ha.**
- Residential Area developed in between these two phases, having population approx. **2 lakh** soles.
- Both Phases has a mix of industries, mainly **Textile, Chemical & Engineering.**
- Except for **10 large & 9 Medium** units, most of the chemical manufacturing units are SSI.
- **Textile Industry** generates about **80%** of the wastewater by volume, though low strength in terms of concentration of pollutants.
- CETPs installed & operative in both phases
- Phase I (DBESA) – **16 MLD** for textile units
- Phase II (DCETP) – **1.5 MLD** for Chemical & other units.
- Total Length of Pipeline– 30 Km., (28.5 Km. HDPE).
- Total No. of Chambers– 1290.

Percentage distribution of industries in Dombivali industrial area



Why Dombivali Cluster comes under CEPI?

Sr.No	Points	Authority
1.	No Buffer Zone between MIDC & Residential Colony. Residential area developed between two MIDC Phase.	MIDC
2.	CETP's are not complied.	MPCB/CETP
3.	Use of High Polluted Pet Coke as a fuel by industry, no proper air pollution control system.	Industry /MPCB
4.	Individual industries effluent treatment plants are not adequate	Industry /MPCB
5.	Effluent carrying line from industry to CETP are broken / damaged.	MIDC
6.	No Treated effluent Disposal line from CETP to Creek	MIDC
7.	No Sewage treatment plant for the sewage generated from residential colony developed by MIDC.	MIDC
8.	Non removal of Sludge from MIDC sump	MIDC
9.	Illegal & unscientific dumping of municipal solid waste by Grampanchayat's in industrial area as well as in residential area	Grampanchayat / Jilla Parishad / MIDC /MMRDA
10.	No adequate Sewage treatment plant for the sewage generated from KDMC area.	KDMC
11.	Un-Scientific Disposal of Municipal Solid Waste in KDMC area.	KDMC

	CEPI SCORE	
Parameters	CEPI SCORE	Average CEPI SCORE
Water	63.5	
Air	66.0	78.41
Land	57.5	

IMPLEMENTATION OF ACTION PLAN FOR DOMBIVALI CLUSTER

Industry Details– MIDC, PH-I & PH-II, Dombivali.

TYPE	LSI	MSI	SSI	TOTAL
RED	4	6	290	300
ORANGE	NIL	2	71	73
GREEN	NIL	2	220	222
TOTAL	4	10	581	595

Chronological order of CEPI meetings – Dombivali MIDC.

Sr. No.	Date	Details	Venue of the Meeting
1	Dec- 2009	CPCB/ MoEF published CEPI	-
2	May - 2010	Preparation of tentative action plan	-
3	May - 2010	Issued letters to Organizations	-
4	Sep - 2010	Issued letters to Industries	-
5	Oct - 2010	Reply received from most of the stake holders	-
6	June - 2011	Submitted 1 st compliance report	-
7	Oct - 2011	Preparation of final action plan	-
8	Dec - 2011	Present status report on CEPI action points submitted to CPCB	-
9	Dec – 2011 / Jan-2012	CEPI review meeting with industries & organizations	Conference hall, MPCB, Kalyan.
10	May - 2012	Review meeting	Conference hall, MPCB, Kalyan.
11	Aug - 2012	Review meeting	Conference hall, DBESA, CETP, Phase – I, Dombivali
12	13.11.2012	Review meeting	Conference hall, MPCB, Kalyan.
13	18.05.2013	Review meeting	Conference hall, MPCB, Kalyan.
14		Review meeting	Conference hall, MPCB, Kalyan.
15	22.08.2013	Review meeting	Conference hall, DBESA, CETP, Phase – I, Dombivali.
16	17.03.2014	Review meeting	Conference hall, MPCB, Kalyan.
17	28.08.2014	Review meeting	KAMA conference hall , Phase – I, MIDC, Dombivali
18	28.04.2015	Review meeting	Conference hall, MPCB, Kalyan.

Short Term Action Plan

S.N	Action Point	Compliance
1.	Performance evaluation of water pollution control measures in the industrial units:-	<ul style="list-style-type: none"> ➤ Survey of industrial unit is carried out in 2010. ➤ Accordingly Board had issued 32 closer direction & 26 show cause notice to industry in 2010. ➤ As per directions industry has complied. ➤ Regular compliance is monitored by Board Officials.
2(a)	Performance evaluation of CETP (Ph-I) :- Performance evaluation of CETP (Ph-II) :-	<ul style="list-style-type: none"> ➤ CETP has carried out performance evaluation study. ➤ On the basis of analysis report and visit, The Board has issued directions to both CETP on 24.05.2010 for the up gradation. ➤ Accordingly both CETP has carried out up gradation of CETP. ➤ The PH-I CETP has provided additional flash mixer in the Year -2015 so as to improve primary treatment. ➤ MIDC has completed the work of 1.5 KM close pipeline & presently discharging treated effluent near Thakurli village, Khambalpada nalla. ➤ CETP has provided Bio reactor & Mono Belt Filter Press. Both units are commissioned in 2014-2015. <p>The work of laying the pipeline upto PH-I is completed 50% & target for commissioning by March-2016.</p>

S.N	Action Point	Compliance	
3.	Taking possession of drainage pipeline carrying effluent to CETP by CETPs:-	<ul style="list-style-type: none"> ➤ Presently MIDC authority maintain the network of effluent carrying pipeline. Also the replacement work of old cement concrete pipeline with HDPE pipeline is completed. 	
4.	Providing tertiary treatment facility and advance waste water treatment :-	<ul style="list-style-type: none"> ➤ The up gradation of DBESA CETP (PH-I)- Capacity—16 MLD) is completed and DPR prepared & submitted to MIDC. ➤ The up gradation of DCETP (PH-II, Capacity—1.5 MLD) is completed and further up gradation & further upgradation is completed by providing new bioreactor of 1 MLD capacity & sand filters & same are commissioned in Yr.2015. 	<ul style="list-style-type: none"> ➤ DBESA CETP- Amount spent Rs. 400.00 lakhs. ➤ Recently invested 40 Lakhs. ➤ DCETP- Amount spent Rs. 39.00 lakhs ➤ Recently invested 150 Lakhs

S.NO	Action Point	Compliance	Amount Spent
4	Status of up gradation work of CETP	<ul style="list-style-type: none"> ➤ D CETP (PH-II):- (1.5 MLD) ➤ Additional Hyca-Reacter for bio- tower "A" installed. ➤ New Bio-reactor of 1 MLD capacity and sand filter is installed & commissioned ➤ Additional two blowers installed for bio-towers. ➤ On line pH monitors installed. ➤ Civil work of launders carried out. ➤ Central control panels with indicators installed for better operational management. ➤ Microscope camera attachment procured for better identification of microbial culture. 	DCETP- expenditure incurred Rs. 39.00 Lakhs & 150 Lakhs
4.	Status of up gradation work of CETP	<ul style="list-style-type: none"> ➤ Converted equalization tank as a 2nd stage bio-reactor. ➤ Installed mono belt filter press for proper removal of sludge & same is in operational. ➤ D.G. Set installed to take care of operations especially during power cut-off on Friday. ➤ DPR for up gradation & expansion is prepared & approved by MIDC & NEERI. 	DCETP- expenditure incurred t Rs. 39.00 lakhs.

S. N	Action Point	Compliance	Amount Spent
4	<p>Status of upgradation of DBESA CETP (PH-I) :-</p>	<ul style="list-style-type: none"> ➤ Installed 10 HP 5 Nos. of new mixers in equalization tank for better equalization. ➤ Installed control panel for better operational management. ➤ Microscope camera attachment procured for better identification of microbial culture. ➤ Online pH meter installed at the outlet. ➤ New Bio reactor 10 nos. are in operation. ➤ 12 Triton Aerators are in operation. ➤ Installed actuator valves for proper sludge removal from primary & secondary clarifiers. ➤ D.G. Set procured to take care of operations specially during power cut-off on Friday. ➤ As per IIT consultation DBESA has installed new flash mixer & same is commissioned. 	<ul style="list-style-type: none"> ➤ DBESA CETP- DBESA CETP- Amount spent Rs. 400.00 Lakhs & 40 Lakhs

S.N.	Action Point	Compliance
5.	<p>Repairing of leakages of Effluent carrying pipeline & its replacement :-</p>	<ul style="list-style-type: none"> ➤ Length of internal effluent carrying pipeline is 30.40 KM. MIDC has replaced same with HDPE line. ➤ Total no. of chambers is 1290. Out of 1290 chambers ,265 new chambers are constructed by MIDC.
6.	<p>Laying of closed pipeline for disposal of treated effluent from CETPs up to Creek:-</p>	<ul style="list-style-type: none"> ➤ Local body KDMC has issued NOC for laying pipeline. ➤ From DBESA to creek 0-1500 mtrs. laying of pipeline work is completed & commissioned. ➤ From 1500 meter to 4650 meter. The NIO has recommended disposal point at 4650 mtrs. away. Now MIDC has requested NIO to reconsider with disposal point. It is expected the NIO should submit report by Dec-2015.

S.N	Action Point	Compliance
7.	VOCs Monitoring :-	<ul style="list-style-type: none"> ➤ Dombivali MIDC area, there are 4 solvent recovery plants out of 4, two plans are captive recovery plants. ➤ VOC monitoring carried in 2011 & 2014 in MIDC Dombivali area & at residential area at different locations along with CETP on behalf of Board. Further the industries are issued SCN & they are completed the work of system upgradation.
8.	Lifting of effluent discharged into nalla due to any accident or leakage or chamber overflow into CETP by providing bandhara on the nalla near CETPs :-	<ul style="list-style-type: none"> ➤ Length of internal effluent carrying pipeline is 30.40 KM. MIDC has replaced same with HDPE line. ➤ Total no. of chambers is 1290. Out of 1290 chambers ,265 new chambers are constructed by MIDC. ➤ MIDC has completed above work , hence there is no need of construction of bandhara at nalla.

S.N	Action Point	Compliance
9 (a).	Provision of continuous power supply to CETPs:-	➤ DCETP & DBESA CETP has installed D.G. sets.
9 (b)	Provision of continuous power supply to Pumping station:-	➤ MIDC has installed D.G. set.
9 (c)	Provision of continuous power supply to STP & Pumping station:-	➤ KDMC has installed DG set for their new 6 STP's and pumping stations.

S.N	Action Point	Compliance
10.	Performance evaluation of air pollution control measures in the industrial units:-	<ul style="list-style-type: none"> ➤ Survey of industrial unit is carried out in 2010. ➤ Accordingly Board had issued 32 closer direction & 26 show cause notice to industry in 2010. ➤ As per directions industry has complied. ➤ Regular compliance is monitored by Board Officials.
11.	Inventorying of units carrying out reactions in open vessels and Ensuring closed operations with adequate APCMs:-	<ul style="list-style-type: none"> ➤ MPCB carried out survey of industrial unit in MIDC area. No such unit observed during the survey.
12.	Inventorying of Hazardous Air Pollutant emitting units And Installation of Leak Detection and Repair (LDAR) in case of pesticide and bulk drug manufacturing units:-	<ul style="list-style-type: none"> ➤ LDAR is installed by one pesticide & one bulk drug unit.

S.N	Action Point	Compliance
13.	Provision of new AAQM station :-	<ul style="list-style-type: none"> ➤ Under SAMP/ NAMP two AAQM station @ DCETP MIDC Phase-II & MIDC Office, Phase-I Dombivali commissioned. ➤ Both are in operations from May 2012. ➤ Stations are operated by M/s. Smt. Chandibai Himathmal Mansukhani College, Ulhasnagar.
14.	Installation of CAAQM Stations :-	<ul style="list-style-type: none"> ➤ Work of installation of one CAAQM stations is in progress.
15.	Online Display of AAQM data	<ul style="list-style-type: none"> ➤ In progress.

S.N	Action Point	Compliance
16.	Repairing of internal roads & proper maintenance of same:-	<ul style="list-style-type: none"> ➤ Cement roads are constructed & regular maintenance is carried by MIDC.
17.	Inventory of solvent using industry & solvent recovery units:-	<ul style="list-style-type: none"> ➤ 4 Nos. of solvent recovery plants. Out of which 2 are captive. One industry is closed & one industry is carrying solvent recovery on job work basis. ➤ 6 Nos. of Caustic Recovery Plants are installed & commissioned.
18.	Ground water monitoring:-	<ul style="list-style-type: none"> ➤ MPCB has started ground water monitoring at 3 locations, i.e. (1)KAMA Office, MIDC, PH-I , (2) Near Pimpleshwar Mandir, MIDC, PH-II, Near M/s Altra Pure Rasayan, MIDC, PH-II, Dombivali. ➤ Also above locations brought under the purview of SWMP.
19.	Proper storage & regular disposal of HW & solid waste:-	<ul style="list-style-type: none"> ➤ All industries are member of CHWTSDF & regular collection and transportation is done by CHWTSDF, Talaja. ➤ Also regular monitoring of inds. are carried out by MPCB. ➤ During the 2010, the HW generation and disposal is 6758 T/Y and during 2014 HW generation and disposal is 10720 T/Y . It means that there is improvement in ETP.

20.	Improper storage and disposal of coal / Ash:	<ul style="list-style-type: none"> ➤ The pet coke is banned and now industries are using coal as a fuel. ➤ The industries are storing coal with in covered shade and ash is disposed through brick manufacturing units. ➤ All the units have provided dust collector system with adequate stack.
21 & 22.	Awareness Program & Monitoring Vision:-	<ul style="list-style-type: none"> ➤ Regular Review meeting are held for up gradation work of CETP by Board Officials. ➤ Tree plantation program is undertaken by MIDC & industrial associations. Presently the survived rate is above 1.10 Lakhs. ➤ MPCB recently organized the seminar on ETS with J-PAL appointed by CPCB & carried out stack monitoring at MIDC, PH-I & PH-II, Dombivali in Oct-Nov-14. ➤ MPCB has conducted meeting for the progress of Dombivali action plan & smell nuisance in surrounding area with stake holders at KAMA office in Sept. 2014.

Long Term Action Plan

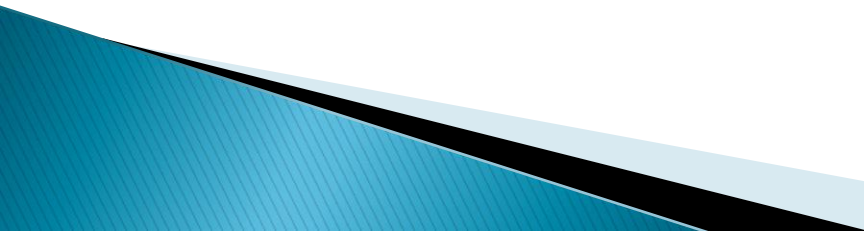
S.N	Action Point	Compliance
1.	Amalgamation of CETP Textile & CETP Chemical and upgradation of CETP Textile:-	<ul style="list-style-type: none"> ➤ Amalgamation of CETP will not be appropriate as both CETP governed by separate industrial association. ➤ Presently there is no consideration by both the CETP for amalgamation. ➤ But the load coming from chemical industries of high COD is mixed with huge quantity of low COD from textile industries in common sump in order to reduce COD load by dilution factor and then distributed to both CETP for further treatment.
2.	Recycling of treated effluent:-	<ul style="list-style-type: none"> ➤ Some industries from Dombivali area is started recycling of the effluent up to 20%. ➤ One unit namely M/s, Fine Organics have achieved ZLD (Zero Liquid Discharge).
3.	Providing underground drainage network for collection of sewage from remote area/ Grampanchayat area:-	<ul style="list-style-type: none"> ➤ No progress is observed in this matter from MIDC / Grampanchayat. ➤ The CETP has prepared DPR to collect 4.5 MLD sewage from the area.

S. N	Action Point	Compliance
4 a.	<p>Providing STP for domestic effluent of residential colony developed by MIDC. Treated water can be used for gardening.</p>	<ul style="list-style-type: none"> ➤ The CETP has prepared DPR to collect 4.5 MLD sewage from the area.
4 b.	<p>Providing STP for KDMC area:-</p>	<ul style="list-style-type: none"> ➤ KDMC has started work of 6 new STP of 123 MLD. ➤ Out of 6 STP's, 2 STP's are commissioned. Work of 4 STP's completed and commissioned by December 2015.
5.	<p>Provision of continuous power supply to STP & their pumping station:-</p>	<ul style="list-style-type: none"> ➤ KDMC has installed DG set for their new STP & Pumping stations.

S.N	Action Point	Compliance
6.	Introduction of Cleaner fuel like CNG/LPG:-	<ul style="list-style-type: none"> ➤ Work of installation of Gas pipe line by Mahanagar Gas authority in Dombivali MIDC area is in progress. ➤ As informed by M/s. Mahanagar Gas authority, gas will be available in Dombivali MIDC Area by Dec. 2015.
7.	The vehicles in this area shall use clean fuel as LPG/ CNG:-	<ul style="list-style-type: none"> ➤ Under RTO, Kalyan 6673 Riksha & Taxi and 1719 LMV Car are converted on LPG fuel.

S. N	Action Point	Compliance
9 a.	<p>Illegal & unscientific dumping of municipal solid waste by Grampanchayat's in industrial area as well as in residential area :-</p>	<ul style="list-style-type: none"> ➤ MIDC has stopped illegal disposal & dumping of solid waste. ➤ MPCB has filed the case against KDMC in the court of Kalyan as per the directives of Hon'ble High Court.
9 b.	<p>Scientific treatment & disposal of MSW- KDMC:-</p>	<ul style="list-style-type: none"> ➤ KDMC is disposing about 600 MT MSW at Adharwadi site illegally and unscientifically, hence case is filed in the court at Kalyan as per directives of High Court. ➤ KDMC has obtained Authorisation from MPCB for new site at Umbarde, Barwe & Manda Kalyan. ➤ Board forfeited BG of Rs. Five lakhs from KDMC for not starting work of new site. New BG of Rs. 10.00 Lakhs is submitted.

NGT Orders– Application No. 37/2013

- ▶ M/s. Vanshakti organization has filed case in the Hon'ble NGT at Pune.
 - ▶ As per the order of NGT, the Board has carried out extensive survey of Dombivali area in Nov / Dec 2013.
 - ▶ As per the survey report, the total 48 units were issued Closure Directions, 33 industries were issued Proposed Directions and 33 industries were issued Show Cause Notices.
 - ▶ All the industries are complied with direction and accordingly Board has issued Interim Directions imposing suitable BG.
 - ▶ The matter is discussed vigorously in the NGT and further order will be expected with in short period.
- 

S. N	Pending Issue	Authority
1.	Treated effluent Disposal line from CETP to Creek, as per recommendation of NIO.	➤ MIDC
2.	Illegal & unscientific dumping of municipal solid waste by Grampanchayat's in industrial area as well as in residential area	➤ Grampanchayat / MIDC / KDMC
3.	Sewage treatment plant for the sewage generated from residential colony developed by MIDC.	➤ MIDC
4.	Scientific Disposal of Municipal Solid Waste and domestic waste in KDMC area.	➤ KDMC
5.	Construction of internal road with in MIDC area.	➤ MIDC
6.	Vigorous monitoring of industries .	➤ MPCB
7.	Upgradation of both CETPs .	➤ CETP Association.

EPI- Water	In Dombivali	Score for Dombivali 2009	Score for Dombivali 2012	Score for Dombivali 2015	Remarks
A Pollutants	A1 - Presence of toxins, A2 – base on the scale of industrial activity A 1-4 >2 R 17 + 100R 54 hence A2= 5	A= A1× A2 4 × 5=20	A= A1× A2 4× 5=20	A= A1× A2 4× 5=20	A- Based on types & scale of industries, difficult to shift industries from Dombivali hence remain same.
B Pathway	B1 - Pollution Concentration , B2 - Impact on People, B3 – Impact on ecological features	B= B1+B2+B3 13+0+0=13	B= B1+B2+B3 7.0+0+0 B=7.0	B= B1+B2+B3 6 + 0+ 0 B= 6	
C Receptor	C1 - Potential affected population, C2 – Level of exposure, C3 – Risk to sensitive receptor.	C= (C1 × C2) + C3 (5×5) + 5 C=30	C= (C1 × C2) + C3 (5×5) + 5 C=30	C= (C1 × C2) + C3 (1×3) + 0 C=3	
D High Risk Element	D Additional High Risk Element	D=15	D=0	D = 10	LSI- Adequate CETP= Inadequate
	A+B+C+D =	EPI-78	EPI=57	EPI= 39	

Aggregate CEPI = $i_m + \{(100 - i_m) \times (i_2/100) \times (i_3/100)\}$
 Where i_m – maximum sub index and i_2 and i_3 are sub indices for other media.

Parameters	CPCB CEPI-2009	CEPI -2011	CEPI-2013	MPCB CEPI-2015	Remarks
Water	63.5	64.50	64.50	39.0	1) There is no buffer zone in between residential & industrial area.
Air	66.0	76.25	51.0	47.0	2) MIDC has not completed the work of internal effluent carrying pipeline , i.e. from PH-II to PH-I . About 50 % work is completed.
Land	57.5	58.50	43.0	36.0	3) The work of CNG gas supply to the industries is not completed & expected to complete by Dec-2015.
Score	78.41	85.21	72.29	54.44	4) Presently domestic effluent from the area is directly discharged into nalla, which further leads to Creek. Due to above points, there is no reduction of score.

THANK YOU

